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L6: Entry 19 of 22

File: USPT

Aug 26, 1997

DOCUMENT-IDENTIFIER: US 5660819 A TITLE: Cosmetic formulations

# Brief Summary Text (9):

Hair is washed by shampoo, treated with rinse, protected by hair dressing, mousse and set by hair spray. In some cases, permanent liquid and hair dye are used. Compositions used for hair treatment contain cosmetic formulations and are often blended with vegetable oil, animal oil, mineral oil, synthetic oil, etc. to form hair care products.

#### Brief Summary Text (11):

Such hair care products are exemplified by: shampoos containing dimethyl silicone, diethyl silicone, methylphenyl or silicone, to give rinse effect (U.S. Pat. No. 2,826,551); a hair cosmetic containing a diol derivative or branched aliphatic alcohol and methyl polysiloxane (Japanese Patent Laid-Open publication No. 47923/1977); a conditioning lotion containing vinyl pyrrolidone-silicone copolymer (Japanese Patent Laid-Open Publication No. 57337/1977); a cosmetic containing quarternary nitrogen-content cationic modified silicone (Japanese Patent Laid-Open Publication No. 66506/1980); a hair treatment composition comprising an anionic polymer compound, a cationic surfactant and oxyalkylene modified organopolysiloxane (Japanese Patent Laid-Open Publication No. 108811/1980); a hair conditioner composition comprising polyoxyalkylene modified organopolysiloxane and watercontaining ethanol or absolute ethanol (Japanese Patent Laid-Open Publication No. 136214/1980); a hair cosmetic comprising water, ethanol, a phosphoric ester salt of polyoxypropylene multivalent-alcohol ether and polyoxyalkylene methylpolysiloxane (Japanese Patent Laid-Open Publication No. 16405/1981); a hair cosmetics containing organosiloxanepolyoxyalkylene copolymer (Japanese Patent Laid-Open Publication No. 22712/1981); a hair conditioner composition comprising polysiloxane containing aminoalkyl groups and hydroxy groups, a cationic polymer and an aqueous carrier (Japanese Patent Laid-Open Publication No. 45406/1981); a shampoo composition comprising an anionic surface active agent, a cationic polymer and a silicone derivative (dimethyl polysiloxane, methylphenyl polysiloxane, polyether modified silicone oil, epoxy modified silicone oil, fluorine modified silicone oil, alcoholmodified silicone oil and alkyl-modified silicone oil) (Japanese Patent Laid-Open Publication No. 72095/1981); a hair cosmetic comprising an olefin liquid polymer, dimethyl polysiloxane, a polymeric chain emulsifying agent and water (Japanese Patent Laid-Open Publication No. 86113/1981); a hair cosmetic comprising quarternary ammonium salt, higher alcohol, and hydrophobic silicone (Japanese Patent Laid-Open Publication No. 92808/1981); an amphoteric acrylic resin, polyoxyalkylene modified organopolysiloxane, and polyethylene glycol (Japanese Patent Laid-Open Publication No. 92811/1981); a hair conditioner comprising as the main component organopolysiloxane having at least one aminoalkyl group, and at least one oxyalkylene group, polyoxyalkylene or hydroxyalkyl group (Japanese Patent Laid-Open Publication No. 74602/1983); a cosmetic containing an amphoteric silicone oil and polyoxyalkylene-modified polysiloxane (Japanese Patent Laid-Open Publication No. 126209/1985); a hair conditioning composition comprising a silicone conditioner, dimethyl silicone copolymer, a lipid vehicle formulation, a cationic surface active agent vehicle formulation and water (Japanese Patent Laid-Open Publication No. 6/1986); a hair coloring composition comprising a coloring agent component, silicone oil and water (Japanese Patent Laid-Open Publication No.

83111/1986); and a hair cosmetic comprising an organosilicon resin and volatile hydrocarbon oil (Japanese Patent Laid-Open Publication No. 158914/1986).

# Brief Summary Text (54):

a powder, e.g., (sericite, silica-alumina, silica gel, kaolin, talc, red iron oxide, ultramarine, mica, mica titanium, magnesium oxide, chromium oxide, antimony oxide, zinc monoxide, zinc dioxide, magnesium carbonate, calcium carbonate, calcium phosphate, barium sulfate, aluminum hydroxide, chromium hydroxide, magnesium metasilicate aluminate, magnesium silicate aluminate, polyethylene powder); and

# Brief Summary Text (56):

In the case the cosmetic formulations of this invention are used in <u>aerosol</u>-type sprays, a pressurizing agent, e.g., propane, butane, trichloromonofluoromethane, dichloro-difluoromethane, dichlorotetrafluoroethane, carbon dioxide or nitrogen gas, may additionally be present in the formulation.

# Detailed Description Text (77):

Example 21: (Hair Treatment)

#### Detailed Description Text (78):

A hair treatment was prepared by mixing the following ingredients:

# Detailed Description Text (79):

Example 22: (Hair Treatment Control)

#### Detailed Description Text (80):

A hair <u>treatment</u> having the same composition as that according to Example 21 was prepared except that the alternating block copolymer was replaced by the polyetherpolysiloxane-polyether linear block copolymer in Example 7.

# <u>Current US Original Classification</u> (1): 424/70.1

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File: USPT

Jul 20, 1999

DOCUMENT-IDENTIFIER: US 5925363 A

TITLE: Cosmetic composition containing, in combination, a superoxide-dismutase and a melanin pigment

# Brief Summary Text (79):

The compositions may also be packaged in the form of an  $\underline{aerosol}$  composition also containing a pressurized propellent agent.

# Brief Summary Text (80):

The compositions for hair according to the invention may be presented in the form of aqueous, alcoholic or hydroalcoholic solutions or in the form of creams, gels, emulsions, mousses or else in the form of an <u>aerosol</u> composition also containing a pressurized propellent agent.

### Brief Summary Text (82):

The synergistic combination according to the invention may be incorporated as a main or secondary ingredient, in various compositions for hair care forming, for example, creams, lotions, gels, serums or mousses for the care of the scalp, shampoos, hairsetting lotions, treating lotions, styling creams or gels, dye compositions (especially oxidation dyes) optionally in the form of dyeing shampoos, restructuring lotions for hair, permanent wave compositions (especially compositions for the first step of a permanent waving), lotions or gels to combat hair loss, and the like.

#### Brief Summary Text (91):

A further subject of the present invention is a process for cosmetic <u>treatment</u> characterized in that a composition as described above, containing at least one SOD in combination with at least one melanin pigment is applied to the skin, to the hair or to the mucosa.

# Brief Summary Text (92):

The cosmetic <u>treatment</u> process of the invention may be implemented particularly by applying the hygienic or cosmetic compositions as defined above using the utilization technique which is conventional for these compositions. For example: application of creams, of gels, of serums, of lotions, of makeup removal milks or antisun compositions to the skin or to the hair, application of a hair lotion to wet hair, shampooing or application of toothpaste to the gums.

#### Brief Summary Text (93):

The cosmetic <u>treatment</u> process of the invention is implemented so as to apply an effective quantity of the SOD and of melanin pigment, that is to say a sufficient quantity to obtain the desired protection effect.

#### Brief Summary Text (94):

This cosmetic <u>treatment</u> process is intended in particular to maintain the keratinous structure of the skin or of the hair so as to avoid their degradation and the unaesthetic effects of such a degradation under the influence of the free radicals induced especially by atmospheric pollutants, to maintain or improve the characteristics of the skin (softness, suppleness, elasticity), of the hair or of the mucosa, to protect the skin or the hair against the harmful effects of

ultraviolet rays and in particular to treat or prevent the premature aging of the skin.

<u>Detailed Description Text</u> (39):

column: 60/80 mesh F1 alumina (source: Supelco),

Current US Cross Reference Classification (3): 424/70.1

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File: USPT

Jan 6, 1998

DOCUMENT-IDENTIFIER: US 5705165 A

TITLE: Cosmetic compositions containing hydrofluorocarbon compounds

### Brief Summary Text (19):

The compounds which act as a reactant or as a catalyst may thus be basic, such as alkali metals, alkali or alkaline earth metal hydroxides, alkali metal alcoholates such as methylates or tertiobutylates, alkaline hydrides such as sodium hydride, or tertiary amines such as pyridine or triethylamine. They may also be Lewis bases, for example cesium, rubidium or potassium fluorides. These compounds may be supported on a solid support such as alumina. Preferably, an alkali alcoholate such as sodium methylate or a tertiary amine such as pyridine is used.

### Brief Summary Text (42):

The composition can be in the form of an emulsion, milk or cream, oily or oleoalcoholic lotion, greasy or oleoalcoholic gel, ionic or non-ionic amphiphilic lipid based vesicular dispersion, solid stick, paste, spray or <a href="mailto:aerosol">aerosol</a> foam.

#### Brief Summary Text (45):

The cosmetic composition can also be used as make-up for eyelashes, eyebrows, nails, lips or for skin in epidermal <u>treatments</u>, a foundation, lipstick, eyeshadow, blusher, eyeliner, mascara or nail polish, for example.

# Detailed Description Text (75): Styling lotion

# <u>Detailed Description Paragraph Table</u> (15):

Compound of Example I 0.5 g Powdered lauryl sulfate, sodium salt, 1.5 g AM 93% AM, sold by MARCHON under the trade name EMPICOL LZV/E Hydrated alumina sold by SOCHALU 48 g under the trade name ALUMINE SH 100 Xanthane gum sold by RHONE POULENC 1.2 g under the trade name RHODICARE S Titanium oxide 1 g Sorbitol, 70% AM in aqueous solution 7 g AM Glycerine 8 g Sodium fluoride 0.22 g Methyl parahydroxybenzoate 0.2 g Sodium saccharinate 0.15 g Flavoring qs Water qsp 100 g

# <u>Current US Cross Reference Classification</u> (5): 424/70.1

#### CLAIMS:

- 4. A cosmetic composition according to claim 1 which is in the form of a milk, cream, oily or oleoalcoholic lotion, oily or oleoalcoholic gel, ionic or non-ionic amphiphilic lipid based vesicular dispersion, solid stick, paste, spray or <a href="mailto:aerosol">aerosol</a> foam.
- 9. A process for the cosmetic <u>treatment</u> of keratinous material comprising applying to the keratinous material the cosmetic composition of claim 1.

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File: USPT · Jan 6, 1998

DOCUMENT-IDENTIFIER: US 5705148 A

TITLE: Use of hydro- and fluorocarbon compounds in cosmetic compositions; hydro- and fluorocarbon compounds; and cosmetic compositions containing these compounds

# Brief Summary Text (23):

The compounds which act as a reactant or as a catalyst may thus be basic, such as alkali metals, alkali or alkaline earth metal hydroxides, alkali metal alcoholates such as methylates or tertiobutylates, alkaline hydrides such as sodium hydride, or tertiary amines such as pyridine or triethylamine. They may also be Lewis bases, for example cesium, rubidium or potassium fluoride. These compounds may be supported on a solid support such as <u>alumina</u>. Preferably, an alkali alcoholate such as sodium methylate or a tertiary amine such as pyridine is used.

# Brief Summary Text (40):

The composition can be in the form of an emulsion, milk or cream, oily or oleoalcoholic lotion, oily or oleoalcoholic gel, ionic or non-ionic amphiphilic lipid based vesicular dispersion, solid stick, paste, spray or <a href="mailto:aerosol">aerosol</a> foam.

#### Brief Summary Text (42):

More precisely, the composition can be a milk or cream for skin or hair, a make-up removing cream, lotion or milk, a sun protection cream, gel, milk or lotion, a shaving cream or foam, an aftershave lotion, a shampoo or conditioner, a styling gel, a direct hair dye, a hair perming lotion, a body deodorant, a toothpaste, a lacquer, a lip care product or a nail care product.

# Brief Summary Text (43):

The cosmetic composition can also be used as make-up for eyelashes, eyebrows, nails, lips or for skin in epidermal treatment creams, a foundation, lipstick, eyeshadow, blusher, eyeliner, mascara or nail polish, for example.

Detailed Description Paragraph Table (1	1):
	<u>Styling</u> gel Cross-linked polyacrylic acid 0.5 g sold by
GOODRICH under the trade name CARBOPOL	
Current US Original Classification (1):	

# 424/70.1 CLAIMS:

1. A cosmetic <u>treatment</u> process, comprising applying to the body a cosmetic composition containing at least one compound with formula (I):

R.sub.F -- (CH.sub.2).sub.n --X--[C.sub.3 H.sub.5 (OH)]--Y-- (CH.sub.2).sub.m --R'.sub.F (I)

where

C.sub.3 H.sub.5 (OH) represents the structures: ##STR6## R.sub.F and R'.sub.F, which may be identical to or different from each other, represent a perfluorinated linear or branched C.sub.4 -C.sub.20 alkyl radical;

m and n, which may be identical to or different from each other, are 0, 1, 2, 3 or 4;

X and Y, which may be identical to or different from each other, represent O or S.

- 4. A cosmetic composition according to claim 3 wherein it is in the form of a milk or cream, oily or oleoalcoholic lotion, oily or oleoalcoholic gel, ionic or non-ionic amphiphilic lipid based vesicular dispersion, solid stick, paste, spray or aerosol foam.
- 5. A cosmetic composition according to any one of claim 2, wherein it is in the form of a milk or cream for skin or hair, a make-up removing cream, lotion or milk, a sun protection cream, gel, milk or lotion, a shaving cream or foam, an aftershave lotion, a shampoo or conditioner, a body deodorant, a toothpaste, a lacquer, a lid, eyelash, nail, lip or skin make-up, a skin treatment cream, a foundation, a lipstick, an eyeshadow, a blusher, an eyeliner, a mascara, a lip care product or a nail care product.

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L4: Entry 4 of 4

File: USPT

Nov 30, 1999

DOCUMENT-IDENTIFIER: US 5993792 A

TITLE: System for customized hair products containing surfactants

# Abstract Text (1):

The invention provides a system for preparing a hair shampoo, conditioner, and styling composition, wherein each system is composed of separate components that can be combined as desired by the user to provide customized hair care formulations. The systems include a water-thin base composition, a thickening composition, and optional enhancing additives, wherein each composition is separately packaged. The viscosity of the end-product shampoo, conditioner, or styling composition can be varied, from a thick, pourable liquid to a thicker, pasty material depending on the amount of thickener that is added to the base.

#### Brief Summary Text (2):

Many shampoos, conditioners, styling compositions, and other hair care products that are currently available are provided as prepared formulations. A drawback of such products is that the user cannot alter the formulation to accommodate their particular hair characteristics or to provide specialized treatment.

# Brief Summary Text (4):

Therefore, one objective of the invention is to provide a system which enables a user to formulate a variety of shampoos, hair conditioners or styling compositions to best suit the hair care needs of the user. Another objective is to provide a system that is easy to use such that a cosmetologist or lay-person is able formulate a customized hair care product.

# Brief Summary Text (6):

These and other objects are achieved by the present invention directed towards a hair care system for preparing shampoos, conditioners, and/or styling agents. The hair care system includes a first package containing a low-viscosity aqueous base composition and a second package containing a compatible liquid thickening composition. The thickening composition is combined with the base composition to form the hair care product having a viscosity greater than the viscosity of the base composition and/or the thickening composition.

#### Brief Summary Text (9):

The invention is also directed to a multi-component hair styling system which includes a low viscosity styling base, a styling thickener and, optionally, one or more enhancing additives wherein each component is separately packaged. The styling base includes fixative agents and quaternary conditioning agents to give styling manageability and conditioning to hair. The viscosity of the end-product styling gel can be varied, from a pourable gel, to a thick, non-pourable gel, depending on the amount of thickener added to the base. Preferably, the conditioner thickening complex, described above, is also compatible with the styling base such that the conditioner thickening complex can be combined with the styling base to provide a styling cream with additional conditioning properties.

#### Brief Summary Text (10):

To provide a uniform distribution of ingredients in the end-product shampoo, conditioner, or styling composition, the appropriate thickening complex is added after the base and desired additives have been combined to form a homogenous mixture. Once the base and thickening composition are combined, the viscosity of the composition is substantially increased due to the chemical interaction of the ingredients. The resulting hair care product is therefore substantially thicker than either the base or thickening composition. Initially, the viscosity of the resulting composition increases as a function of time. Once the desired viscosity is obtained, it is maintained indefinitely. Typically, within about 30-60 minutes after combining the base and thickening composition, the shampoo, conditioner, or styling composition are ready to use.

#### Brief Summary Text (11):

Additional compositions can optionally be included in the shampoo, conditioner, or styling system to enhance hair treatment. Such compositions include shine enhancers, moisturizers, herbal additives, hair strengtheners, vitamin additives, colorants, hair thickening agents, setting and styling agents, dandruff control agents, ultraviolet absorbers, essential oils, and fragrances.

#### Brief Summary Text (12):

The hair care system of the invention is particularly useful in hair salons, where a hair technician can examine a client's hair and provide a customized shampoo, conditioner or styling composition that is specially formulated for that individual's hair. The hair care systems make it easy to formulate customized hair products by a hair technician or other user. Additionally, the system provides flexibility wherein some or all of the customized compositions may be changed in response to seasonal fluctuations in hair condition as well as hair style changes.

#### Brief Summary Text (14):

The invention is directed to a system for formulating customized hair care products, such as hair shampoo, conditioner, and styling compositions. The hair care system is composed of separately packaged components, including a low-viscosity aqueous base composition, a compatible thickening composition and, optionally, one or more enhancing additives. When the thickening composition is combined with the base composition to form the customized hair care product, the thickening composition substantially increases the viscosity of the base composition.

# Brief Summary Text (35):

The shampoo system can optionally include one or more additives to enhance hair treatment. The additives may be packaged individually or as a blend containing multiple, complimentary additives. To ensure an even distribution of ingredients in the end-product shampoo, the shampoo enhancing additives are preferably added to the low viscosity shampoo base prior to addition of the shampoo thickener.

#### Brief Summary Text (36):

An example of a useful enhancing additive includes a hair strengthening composition. Suitable hair strengthening compositions include plant or animal proteins such as wheat protein or collagen. Other enhancing additives include herbal compositions that contain plant extracts such as aloe, to provide a soothing effect, or cucumber, to provide a stimulating effect. A shine enhancer made of organosiloxanes or silicone polymers can also be included along with moisturizing compositions containing plant—, animal—, or mineral—based oil. Additionally, vitamins, colorants or fixative compositions, such as those containing resins and quaternary ammonium salts to provide styling control and conditioning, can be added.

# Brief Summary Text (53):

The conditioner is preferably formulated with about 100 parts conditioner base to which is added about 1-7 parts colorant composition, about 3-5 parts shine

enhancing additive, about 3-5 parts moisturizing composition, about 1-5 parts herbal additive, about 3-10 parts hair strengthening composition, and about 1-5 parts vitamin additive. After thoroughly mixing the conditioner base with the additive compositions, about 2-5 parts of the thickening complex is added, depending on the desired viscosity. For example, adding about 2 parts of thickener provides a "light" conditioner with a viscosity of a pourable liquid. Adding about 5 parts thickener provides a "heavy" conditioner with a viscosity of a stiff cream. Styling or volumizing compositions can be added to the conditioning base, before thickening, to create a <a href="Leave-in styling">Leave-in styling</a> cream. Additionally, the <a href="styling">styling</a> composition thickener can be used to thicken the conditioner for a different consistency conditioner. The same ratios of base to thickening agent still apply.

#### Brief Summary Text (55):

The conditioner system can additionally include one or more compositions to enhance hair <u>treatment</u>. To insure an even distribution of enhancing additives in the end-product, the conditioner enhancing additives are preferably added to the conditioner base prior to addition of the conditioner thickener.

# Brief Summary Text (57):

Hair <u>Styling</u> System

### Brief Summary Text (58):.

The multi-component hair <u>styling</u> system includes a low viscosity <u>styling</u> base, a <u>styling</u> thickener, and, optionally, one or more enhancing additives wherein the components are separately packaged.

### Brief Summary Text (59):

Styling Base

#### Brief Summary Text (60):

The <u>styling</u> base is prepared as a low viscosity, aqueous solution. The viscosity of the <u>styling</u> base is preferably low enough that additive ingredients are easily combined with the base. Typically, the <u>styling</u> base has a viscosity from about 200 to 600 cps. The <u>styling</u> base preferably contains fixative agents and quaternary conditioning agents to provide <u>styling</u> manageability (hold) and conditioning.

#### Brief Summary Text (61):

A fixative agent is included in the <u>styling</u> base. The fixative agent forms a film on the user's hair that helps hold the hair in a given style. Examples of suitable fixative agents include polyvinyl pyrrolidone (PVP), a copolymer of polyvinyl pyrrolidone and polyvinyl alcohol (PVP/VA), a copolymer of polyvinyl pyrrolidone and hexadecene, butylated polyvinyl pyrrolidone, a copolymer of polyvinyl pyrrolidone and dimethylaminoethylmethacrylate, a butyl ester of a polymethylvinylether and maleic anhydride copolymer (PVM/MA), or an ethyl ester of PVM/IA. The <u>styling</u> base can include about 2 wt % to about 8 wt % of a fixative agent, more preferably about 4 wt % to about 6 wt %.

# Brief Summary Text (62):

Examples of suitable quaternary conditioning agents include polyquaterniums (i.e., -6, -7, -10, -11, -16, -28). The <u>styling</u> base can include about 0.25 wt % to about 4.00 wt %, preferably about 0.5 wt % to about 1.0 wt %, of a quaternary ammonium salt.

#### Brief Summary Text (63):

Typically, the <u>styling</u> base includes about 85-90 wt % water, more preferably about 90-92 wt % water. Additionally, the <u>styling</u> base includes about 2 wt % to about 4 wt % fixative agent, about 0.5 wt % to about 1.0 wt % quaternary conditioning agent, 0.03-0.25 wt % chelating agents/sequestering agents such as disodium EDTA or tetrasodium EDTA, and 0.05-2.0 wt % humectant such as glycerin, propylene glycol, or sorbitol. Optionally, the <u>styling</u> base includes about 0.05 wt % to about 1.25 wt

% of a germicidal preservative agent such as methylparaben, propylparaben, diazolidinyl urea, or phenoxyethanol.

# Brief Summary Text (64): Styling Thickening Agent

#### Brief Summary Text (65):

To transform the low-viscosity styling base into a styling composition with a suitable viscosity, the styling system includes a water dispersible thickening agent that is compatible with the styling base. As used herein "compatible" means that the thickening agent is miscible with the styling base. Thus, the thickening agent does not coagulate or precipitate upon being combined with the base. Instead, the thickening agent and base are easily combined to form a stable solution.

#### Brief Summary Text (66):

The thickening complex functions as a polymeric dispersion, which, upon being blended with the styling base, swells to produce an end-product styling composition having a viscosity greater than either the styling base or the styling thickening complex. A preferred styling thickening agent is a translucent, pourable, water-dispersible liquid. Preferably the thickening agent contains polyacrylamide, C13-14 isoparaffin and laureth-7. An example of a suitable thickening agent is Sepigel 305 (available from Seppic, Inc.; Fairfield, N.J.).

# Brief Summary Text (67):

The viscosity of the end-product styling gel can be varied from that of a pourable gel, to a thick, non-pourable gel, depending on the amount of thickener added to the base. The styling thickening complex is preferably combined with the styling base after the addition and dispersion of the other desired ingredients to insure an even distribution of ingredients in the composition.

#### Brief Summary Text (68):

After the <u>styling</u> thickener is added to the <u>styling</u> base, the mixture is shaken for 2-5 minutes, after which the mixture is allowed to rest for 15-30 minutes. After 15-30 minutes, the mixture is shaken again. At this time, the viscosity of the <u>styling</u> product is about 75% of the final viscosity. The final viscosity typically develops after 12-24 hours.

# Brief Summary Text (69):

For example, adding about 1 to 2 parts thickener to about 98 to 99 parts styling base provides an end-product styling gel with a viscosity of about 5000 to 10,000 cps within about 1 to 2 minutes. The end-product styling gel becomes thicker over time, reaching a maximum viscosity of about 12,000 to 15,000 cps after about 12-24 hours. The composition retains that viscosity indefinitely.

#### Brief Summary Text (70):

The <u>styling</u> gel is preferably formulated with about 100 parts <u>styling</u> base to which is added about 1-5 parts herbal additive, 0.1-0.2 parts shine additive, 0.5-1.0 parts hair strengthening additive and 1-5 parts vitamin additive. If additional hold is desired, 1-5 parts volumizing/<u>styling</u> composition are added. After thoroughly mixing the conditioner base with the additive compositions, the hair <u>styling</u> thickening complex is added at about 1-4 parts, according to the desired amount of thickness. For example, the addition of about 1-2 parts thickener with provide a "light" gel with the viscosity of a pourable liquid (5,000-10,000 cps), and the addition of about 3-4 parts thickener will provide a "heavy" gel with a viscosity of a stiff gel (100,000-200,000 cps).

# Brief Summary Text (71):

Optionally, the conditioner thickener, discussed above, can be added to the <u>styling</u> base, in place of, or in addition to the <u>styling</u> thickener, to enhance the conditioning properties of the gel composition.

# Brief Summary Text (72): Styling Enhancing Additives

#### Brief Summary Text (73):

The <u>styling</u> system can additionally include one or more compositions to enhance hair <u>treatment</u>. To insure an even distribution of enhancing additives in the end-product, the <u>styling</u> enhancing additives are preferably added to the <u>styling</u> base prior to addition of the <u>styling</u> thickener.

#### Brief Summary Text (74):

Examples of useful enhancing additives include a hair strengthening composition or herbal compositions containing plant extracts. A shine enhancer can also be included along with moisturizing compositions. Additionally, vitamins or colorants can be added. For additional hold, a volumizing/styling composition can be added.

#### Brief Summary Text (76):

The shampoo, hair conditioner, and styling systems may optionally include one or more compositions for enhancing properties of the system. Examples of suitable enhancing additives include a shine enhancer, oil-based moisturizer, herbal additive, hair strengthener, vitamin additive, colorant, body building and conditioning polymers, natural or synthetic fragrance oils (aroma), UV absorbers, and dandruff control compounds.

### Brief Summary Text (87):

A useful composition for enhancing either the shampoo, conditioner or <u>styling</u> product is an herbal additive composition that includes one or more plant-derived extracts to provide either a soothing or stimulating effect. The plant extract can be derived from flowers, twigs, roots and other plant parts by methods known and used in the art. For example, an extract can be obtained using water or steam distillation or extraction using alcohol, propylene glycol, glycerin, or a hydrocarbon solvent, cold-pressing or fluid maceration. Plant extracts are also commercially available, for example, from Active Organics, Brooks Industries or Bio Botanica.

#### Brief Summary Text (91):

Volumizing/Styling Composition

# Brief Summary Text (92):

A volumizing/styling composition is a concentrated liquid mixture that provides additional styling control when used in the styling base. When used in the shampoo base, the volumizing/styling composition leaves the hair feeling thicker, fuller, and more manageable. When combined with conditioner base and conditioner thickener, a leave-in styling cream is created, giving the user light styling control with conditioning. If combined with the traditional rinse-out conditioner system, the volumizing/styling composition leaves the hair feeling thicker, fuller, and more manageable.

# Brief Summary Text (93):

A volumizing/styling composition typically contains 85-90 wt % water, 5-10 wt % fixative agent, 0.5-3 wt % quaternary conditioning agents (e.g., polyquaternium -6, -7, -10, -11, -16, -28), and 0.05-1.25 wt % of a germicidal preservative agent.

### Brief Summary Text (95):

The shampoo, conditioner or <u>styling</u> system can also include a strengthening composition that contains a strengthening agent to penetrate the hair to help condition, strengthen and retain moisture in fine, limp hair and protein deficient hair. The strengthening agent can also provide deep conditioning for excessively dry or chemically processed hair. A hair strengthening composition typically includes one or more plant-derived proteins, animal-derived proteins, amino acids,

or a combination thereof. Preferably, the hair strengthening composition is a blend of concentrated proteins.

#### Brief Summary Text (106):

The systems of the invention may also include coloring agents, such as semi-permanent dyes. Adding a coloring agent to the shampoo, conditioner or <u>styling</u> composition enhances the appearance of color treated hair and can highlight the natural color of untreated hair.

#### Brief Summary Text (121):

The components that make up the shampoo, conditioner and <u>styling</u> systems are packaged separately as part of an article of manufacture, or kit.

# Brief\_Summary Text (122):

The kit for the hair care system includes a base, a thickener and separate enhancing additives, wherein each component is packaged in a separate container such as a vial, jar, pouch, or tube. The kit further includes instructions for formulating the hair care product or using the hair care product. The instructions can provide one or more formulations of the components, including combinations of the base with the thickener and desired enhancing additives, to achieve a desired shampoo, conditioner or styling composition. The components of the kit, i.e., the base, thickener, enhancing additives and instructions can be contained or separately packaged within a packaging material, such as a box or bag.

### Brief Summary Text (123):

It is preferred that the kit include a dispenser for apportioning a measured amount of thickener or enhancing additive into the shampoo, conditioner, or styling base. Examples of suitable dispensers include containers having a pump dispenser, as known and used in the art. Preferably the pump is calibrated to dispense about 0.5-15 ml of a composition each time the pump is depressed.

# Brief Summary Text (127):

To use the formulated shampoo, the user's hair is wetted and the shampoo is massaged into the hair. After the shampoo is rinsed from the hair, using water, the formulated conditioner is applied and massaged into the wet hair. After about 1-2 minutes, the conditioner is rinsed out of the hair, which is then combed and dried. The styling gel/cream formulation can be applied to wet or dry hair depending on the styling needs to the user.

#### Detailed Description Text (20):

Styling Base Composition

#### Detailed Description Text (21):

A <u>styling</u> base was prepared by combining the ingredients shown in TABLE 6, below, in the following manner:

# Detailed Description Text (25):

Styling Thickening Composition

#### Detailed Description Text (26):

The <u>styling</u> thickener was a commercially prepared polymeric dispersion manufactured by Seppic, Inc. under the trademark Sepigel 305. The formulation of the Sepigel material is shown below:

# Detailed Description Text (33):

A moisturizing composition for inclusion in the shampoo, conditioner, or <a href="styling">styling</a> composition was prepared by combining together the ingredients shown below in TABLE 8, and mixing the ingredients in a dry, stainless vessel at about 150-200 rpm speed, at 25-30.degree. C., for about 15-30 minutes. The composition was an amber colored, clear, low viscosity, oily liquid.

### Detailed Description Text (36):

A multi-vitamin composition for inclusion in the shampoo, conditioner, or <a href="styling">styling</a> composition was prepared by combining together the ingredients shown in TABLE 9 using the following procedure:

# <u>Detailed Description Text</u> (51): Volumizing/Styling Composition

# Detailed Description Text (52):

An optional volumizing/styling composition was prepared by combining the ingredients shown in TABLE 14, below following the procedure outlined below:

#### Detailed Description Text (57):

Color concentrates were prepared for use in the shampoo, conditioner, and <u>styling</u> compositions according to the formulations shown below in TABLES 15-21. The concentrates were prepared by combining together the ingredients in the following manner:

# <u>Current US Cross Reference Classification</u> (2): 424/70.1

#### CLAIMS:

- 2. The system of claim 1, further comprising at least one hair enhancing additive selected from the group consisting of shine enhancer, moisturizer, herbal additive, hair strengthening agent, vitamin additive, non-oxidative colorant, volumizing/styling agent wherein at least one enhancing additive is separately packaged from the first and second package.
- 3. A system for use in preparing a customized hair styling composition, comprising:
- a first package containing an aqueous styling base; and
- a second package containing a styling thickener;

the aqueous  $\underline{\text{styling}}$  base having a viscosity of about 200 to about 600 cps, and comprising a resinous fixative agent; and

the <u>styling</u> thickener being compatible with the <u>styling</u> base and comprising polyacrylamide, isoparafin and a nonionic surfactant;

wherein the <u>styling</u> thickener is combined with the <u>styling</u> base to form the <u>styling</u> composition having a viscosity of about 5,000-200,000 cps.

- 7. The system of claim 3, wherein the <u>styling</u> thickener and <u>styling</u> base are combined in a ratio of about 1:99 to about 2:98 and the resulting <u>styling</u> composition has a viscosity of about 5,000-10,000 cps about 1-2 minutes after the <u>styling</u> thickener and <u>styling</u> base are combined.
- 8. The system of claim 3, wherein the <u>styling</u> thickener and <u>styling</u> base are combined in a ratio of about 3:97 to about 4:96 and the resulting <u>styling</u> composition has a viscosity of about 100,000-200,000 cps.
- 10. A method of preparing a customized hair styling composition, comprising:

combining a first package containing an aqueous  $\underline{\text{styling}}$  base having a viscosity of about 200 to about 600 cps and a second package containing a compatible  $\underline{\text{styling}}$  thickener having a second viscosity

wherein the styling base comprises a resinous fixative agent; the styling thickener comprises polyacrylamide, isoparafin and a nonionic surfactant;

wherein the customized styling composition has a viscosity of about 5,000 cps to about 200,000 cps.

- 18. The system of claim 3, further comprising at least one hair enhancing additive selected from the group consisting of shine enhancer, moisturizer, herbal additive, hair strengthening agent, vitamin additive, non-oxidative colorant, volumizing/styling agent wherein at least one enhancing additive is separately packaged from the first and second package.
- 19. The system of claim 3, wherein at least one of the styling base or the styling thickener further comprise a germicidal agent, an antioxidant, a chelating/sequestering agent, fragrance, or UV absorber.
- 20. The system of claim 3, packaged as an article of manufacture in combination with instructions for formulating the system to produce the customized hair styling composition.